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"A Study of Computational Techniques Related to Prediction of Centriods of Dosage Beyond Measured Time \mathbf{T}_n Where n is Known"

Final Report by

Dr. Lou Allen Bell-Gray

May 22, 1985

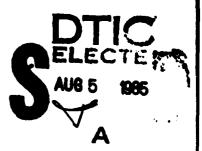
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Jackson State University Jackson, Ms. 39217

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It is the general consensus of the scientific community, that dosage effect beyond some designated time To is frequently not known. It was the contention of this investigator that probabilities could be developed using Cauchy type integrals on closed contours. For to deal with dosage effects, we must realize that the function resulting during To may be non-periodic. The question as to what to base reaction prediction in relation to a given time interval was examined from the original viewpoint of the investigator.

Problem Statement

What technique should be employed in order to predict the development of centroids with respect to a dosage or medical phenomena having certain traits designated by the researcher?

Summary of Results

Based on the literature read, there was evidence given which indicated Cauchy distributions had no moments. A lack of moments did not provide means for identification of centroids. Also, based on the literature, clustering methods are the best procedure for analyzing data for the original purpose of the research project. To do cluster analysis, it is generally recomended that a metric be developed. The metrics most frequently recommended are the Minkowski metric, absolute or city block metric or L_{1-norm} metric, or Euclidean metric or L_{2-norm} metric.

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